REMARKS

The acknowledgment of the claim for foreign priority under 35 U.S.C. §119 and the receipt of the priority document is noted with appreciation.

Figures 1 and 2 of the drawings were objected to on the ground that these figures should be designated by a legend such as –Prior Art–. Replacement drawing sheets with the legend –Prior Art– are supplied with this amendment as required by the Examiner.

Figures 1 and 4 of the drawings were also objected to on the ground that descriptive text legends should be added to those figures. It is believed that the Examiner meant Figures 1 and 3, rather than 1 and 4, and based on that assumption, the replacement drawing sheets for Figures 1 and 3 have been provided with text legends as required.

The specification was objected to for failing to provide proper antecedent basis for the claimed subject matter of claim 1. Specifically, claim 1 recites "changed **data rates**" in line 7, but there is no support for "data rate" in the specification. The Examiner notes that the disclosure appears to support "changed in loading". The intent of the disclosed and claimed invention is to base the decision either on changed data rate (of the sender) or network load (which is called "network characteristics"). The specification has been amended to more accurately reflect this intent than in the original German translation. Claim 1 has been amended to recite "sender data rate". A similar amendment has been made to claim 12. As amended, it is believed that this objection to the specification has been overcome.

In addition, the specification has been carefully reviewed, and minor errors in grammar and form have been corrected. No new matter has been added.

Claims 1 to 18 are pending in the application. Each of claims 1 to 18 have been amended by this amendment in response to the objections and rejections under 35 U.S.C. §112 raised by the Examiner.

Claims 1 to 3, 11, 12 to 14, 16, and 17 were objected to because of various listed informalities. The first of these was the Examiner's contention that the recitation of "Mechanism for . . ." did not fall into one of the classes of "a process,

machine, manufacture or composition of matter". Clearly, a "mechanism" is a "machine"; however, in order to expedite the prosecution of the application, the term "mechanism" has been changed to "apparatus".

The Examiner in addition kindly suggested various formatting and other amendments which, for the most part, have been adopted by this amendment. In particular, the claims have all been carefully reviewed and amended to avoid lack of antecedent basis for the several recitations. Of note, however, it is submitted that claim 13 which, as amended, recites "The apparatus according to claim 6, wherein, after switching by the switch, the subcomponents of the first processing unit are de-attached from each other", is clear and unambiguous. Perhaps the Examiner considers the word "de-attached" to be unclear, but it is submitted that the meaning of that word is perfectly clear.

Claims 1 to 18 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner contends that the claim(s) contain subject matter which is not described in the specification in such a way a to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the Examiner contends, particularly with respect to claim 1, that the use of "and/or" implies a complete set of different combinations which is not supported by the specification. In response, the claims have been amended to delete "and/or" and substitute –or–. It is quite clear, for example, that the specification quite unequivocally discloses an "apparatus for the transmission of time-synchronous data from a sender [1] to a receiver [2] using a network, wherein the data is processed and transmitted at the sender as well as the receiver" which comprises "a first processing unit [4] and a second processing unit [4] parallel to the first processing unit, wherein the second processing unit is setup and adapted based on changed sender data rate or network characteristics, wherein data processing and transmission of the time-synchronous data is continued within the first processing unit during the setup and adaption of the second processing unit" and "a switch [5] selecting between the first and second processing units, the processing and transmission of the time-synchronous data initially being performed by the first processing unit and, after switching by the switch, the processing and transmission

of the time-synchronous data is performed using the second processing unit such that the processing and transmission of the time-synchronous data is performed within the second processing unit", as specifically recited in claim 1. See particularly the specification beginning at page 11.

The Examiner contends that there is no support in the specification for the limitation of claim 13. First of all, the Examiner, as evidenced by his objection to claim 13, has not understood the clear meaning of this recitation. The Examiner is referred to page 9, lines 29 to 33, which provides support for this feature. The Examiner's assumption "for purposes of examination" that after the switching, "the first processing subcomponents (6a', 6b', ...) are de-attached/separated from the second processing subcomponents (7a', 7b', ...)" is incorrect.

As to claim 14, the Examiner demonstrates a similar misconception. The idea here is the same as discussed on page 9 of the specification; that is, resources which are not currently being used are returned to the system for re-use.

Claims 1 to 18 were additionally rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The grounds for this rejection are a repeat of those set out for the rejection under 35 U.S.C. §112, first paragraph, and in particular the use of "and/or". As already mentioned, "and/or" has been replaced by –or– and, therefore, it is believed that this rejection has been overcome by this amendment.

Claims 1 to 4 and 6 to 18 were rejected under 35 U.S.C. §102(b) as being anticipated by International Patent Publication WO 00/62254 of Zahn. This rejection is respectfully traversed for the reason that Zahn neither discloses nor suggests the claimed invention.

The disclosed and claimed invention is directed to an apparatus for the processing and transmission of an "apparatus for the transmission of time-synchronous data from a sender to a receiver using a network", and in particular, the network contemplated by the inventors is the Internet where the time-synchronous data is packetized for transmission using the Internet Protocol (IP). Contrary to the Examiner's contention, Zahn does not disclose transmission of time-synchronous data and certainly does not disclose transmission of that data using a network. On the contrary, Zahn discloses a video processor board for a personal computer (PC) for connection to the Personal Computer Interface (PCI)

bus. This video processor board is for non-linear video editing (NLE) systems which, by their very nature, are not transmitting time-synchronous data from a sender to a receiver. The Zahn video processor board may include multiple processors, but their operation is entirely different from the claimed first and second processors. In the case of the Zahn video processor board, the multiple processors are for the purpose of improving rendering speed of the video data being edited. This process is not real time. In contrast, the first and second processing units of the claimed invention operate in a manner to avoid time delays and resulting dropping of frames in the transmission of the time-synchronous data. This is process is real time.

Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over the Zahn International Patent Publication in view of U.S. Patent No. 7,095,717 to Muniere. This rejection is respectfully traversed for the reason that the combination of Zahn and Muniere does not teach, suggest or otherwise make obvious the claimed invention.

In making this rejection, the Examiner states that "Zahn does not explicitly disclose [the switching condition] reaches at [sic] a predetermined value." As discussed above, Zahn does not disclose the basic system recited in claim 1. The Zahn video processor board is for an entirely different function and is constructed and operates in a manner which is entirely different from the disclosed and claimed invention. Muniere discloses a method for multiplexing two data flows on a radio communication channel and corresponding transmitter. Since Zahn is not transmitting data from a sender to a receiver, Muniere cannot be combined with Zahn to make a workable system. The two are in entirely different technical fields. Moreover, the claimed invention has nothing whatsoever to do with multiplexing two data flows. On the contrary, the claimed invention is concerned with the transmission of one data flow only, the time-synchronous data of, for example, video frames. Clearly there is no basis in fact for the conclusion of obviousness based on Zahn in combination with Muniere.

It is respectfully submitted that the claims have been misinterpreted by the Examiner. To aid the Examiner in his reconsideration of the claims, the following comments are offered. In the claimed invention, Applicants achieve seamless

handovers between potentially many different (arbitrary complex) processing units as a mechanism for optimizing transmission quality in packet-based networks and low-power devices (e.g.., mobile telephones). The centeral idea is to allow adaption between various independent instantiations of processing units, as determined by a particular operating environment. Processing units may contain arbitrary complex subcomponents (codecs, filters, packetizers, etc.) and may be available locally within a device or downloaded by standard means over a network connection. Applicants claimed invention is novel in that it supports seamless adaption between the current operating processing chain and newly instantiated chains either by feeding data simultaneously to both chains or utilizing additional processing resources for encoding within the second chain during setup.

In the claimed invention, Applicants switch the input of two or more independent processing units, where it is always guaranteed that only one of them is processing at any given time. In addition, Applicants coordinate the control sequence of parallel processing unit operations (setup, teardown or resource sharing) in order to minimize processing power requirements and allow the installation of potentially useful processing units specific to a given operational environment.

The features which characterize the claimed invention include the following:

- A digital media processing system with arbitrary number of "processing units".

- Generally applicable to real-time IP streaming media scenarios.

- Processing units are "not specified" and may include arbitrary chains of codecs, packetizers, etc.

- Seamless switching is intended to accommodate additional processing units (e.g., downloaded).

- Processing chain components may contain quality settings (e.g., quantizer settings).

- Processing chains are instantiated into memory "on-demand" by adaptation algorithms.

- Seamless switching refers to instantiating a processing unit and activating

its input.

- Seamless switching does accommodate processing chain instantiation timing.
- Processing chains are never fed data simultaneously.
- Processing chains never operate on input data simultaneously.
- Seamless switching may include teardown or timed caching of unneeded processing units.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1 to 18 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

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